## 2. *Demand Analysis*

The term demand implies a desire for a commodity backed by the ability and willingness to pay for it. Demand is the mother of production.

> *“**According to Prof. Bober**, "By demand we mean the various quantities of a given commodity or service which consumers would buy in one market in a given period of time at various prices or at various incomes or at various prices of related goods."*

Demand is a relationship between the price and quantity demanded other things of constant.

> *Three things are essential for desire a commodity to become effective demand.*
> - *Desire a commodity*
> - *Willingness to pay*
> - *Ability to pay for the commodity*

The Three alternative way to expression of demand :

**Demand Analysis**
- ***A Demand Function***
- ***A Demand Schedule***
- ***A Demand Curve***

**A Demand Function**

***Demand function is a function that describe how much of a commodity will be purchased at the prevailing prices of that commodity and related commodities, alternative income levels, and alternative values of other variables affecting demand.***

- Price is not the only factor which determines the level of demand for a good.
- Other important factor is income. The rise in income will lead to an increase in demand for a normal commodity.
- A few goods are named as inferior goods for which the demand will fall, when income rises. Another important factor which influences the demand for a good is the price of other goods.

Other factors which affect the demand for a good apart from the above mentioned factors are :

- Changes in Population
- Changes in Fashion
- Changes in Taste
- Changes in Advertising

**A Demand Schedule**

***The demanded schedule is generally represented by a table which show how quantity demanded of goods varies the price other things remain constant.***

| Price of Bread | Qty. of Demand |
|---|---|
| 50 | 1 |
| 45 | 2 |
| 40 | 3 |
| 35 | 5 |
| 30 | 7 |
| 25 | 9 |
| 20 | 12 |
| 15 | 15 |
| 10 | 20 |

**A Demand Curve**

***A graphical representation of the demand schedule is the demand curve as shown in figure. Demand curves generally have a negative gradient indicating the inverse relationship between quantity demanded and price.***

DID YOU KNOW ?

*There are at least three accepted explanations of why demand curves slope downwards 1:*
- *The law of diminishing marginal utility*
- *The Income effect*
- *The substitution effect*

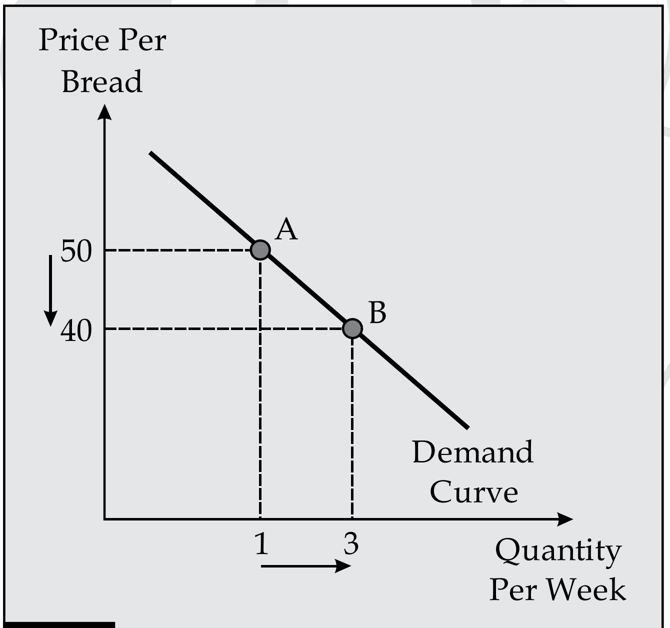


***Fig. :*** ***Demand Curve***

**Types of Demand**

**Demand for Consumer Goods v/s Producer Goods**

*The different in these two types of demand are that consumer goods are needed for direct consumption, while the producer goods are needed for producing other goods.* Soft drink, milk, bread etc. are the examples of consumer goods, while the various types of machine, tools etc.

**Autonomous Demand v/s Derived Demand**

*Autonomous demand refers to the demand for products and services directly. The demand for the services of a super specialty hospital can be considered as autonomous whereas the demand for the hotels around the hospital is called a derived demand.*

### Demand for Durable Goods v/s Perishable Goods

Here the demand for goods is classified based on their durability. *Durable goods are those goods which gives services relatively for a long period. The use of perishable goods is very less may be in hours or days.* Durable goods meet the both the current as well as future demand, whereas perishable goods meet only the current demand. Example of perishable goods: milk, vegetables, fish etc. Example of durable goods: rice, wheat, sugar etc.

### Firm Demand v/s Industry Demand

The firm is a single business unit whereas industry refers to the group of firm carrying on similar activity. *The quantity of goods demanded by single is called firm demand and the quantity demanded by industry as a whole is called industry demand.*

### Short Run Demand v/s Long Run Demand

The short run and long run cannot be clearly defined other than in terms of duration of time. *The demand for particular product /service in a given region for a particular day can be viewed as long run demand. Short run refers to a period of shorter duration and long run refers to the relatively period of longer duration.*

### New Demand v/s Replacement Demand

*New demand refers to the demand of the new products and it is the addition to the existing stock. In replacement demand, the item is purchased to maintain the asset in good condition.* The demand for cars in new demand and the demand spare parts is replacement demand. Replacement demand may also refer to the demand resulting out of replacing the existing assets with the new ones.

### Total Market v/s Segment market Demand

let us take the consumption of sugar in a given region. The total demand for sugar in the region is the total market demand. The demand for the sugar from the sweet making industry from this region is the segment market demand. The aggregate demand for all the segment market is called the total market demand.

### Factor Affecting of Demand

**Factor Affecting of Demand**

- *Price of the Commodity*
- *Income of the Consumer*
- *Prices of Related Goods*
- *Tastes of the Consumers*
- *Wealth*
- *Population*
- *Government Policy*
- *Expectations Regarding the Future*
- *Climate and Weather*
- *State of Business*

**1. Price of the Commodity :** The most important factor-affecting amount demanded is the price of the commodity. The amount of a commodity demanded at a particular price is more properly called price demand. ***The relation between price and demand is called the Law of Demand.*** It is not only the existing price but also the expected changes in price, which affect demand.

**2. Income of the Consumer :** The demand for goods also depends upon the income of consumers. With an increase in income, the consumer's purchasing power increases, because he is now in a position to buy more goods. Consequently, the consumer's demand for goods increases.

There are three types of goods for each of which the effect of income differs :

***Normal Goods :*** *Increase in income has effect on the demand for goods. Generally, income of the people is directly related to their demand. That is when "I" goes up, demand for normal goods goes up and when "I" falls, demand also falls, example laptop, etc. Thus there is a direct relationship between income and demand of normal goods.*

***Necessity Goods :*** *For certain goods called necessities, demand is not related to income. Salt, petrol, and LPG are considered necessity goods.*

*Demand for salt does not increase with the increase in income and does not decrease with the decrease in income. It means that it is irrespective of income.*

***Inferior Goods :*** *Goods are said to be inferior goods if its demand falls with increase in income of the consumer. Thus there is an inverse relationship between income and demand of inferior goods.*

**3. Prices of Related Goods :** The demand for a commodity is also affected by the changes in prices of the related goods also. Related goods can be of two types :

**(i)** **Substitutes** which can replace each other in use; for example, tea and coffee are substitutes. The change in price of a substitute has effect on a commodity's demand in the same direction in which price changes. The rise in price of coffee shall raise the demand for tea;

**(ii)** **Complementary** foods are those which are jointly demanded, such as pen and ink. In such cases complementary goods have opposite relationship between price of one commodity and the amount demanded for the other. If the price of pens goes up, their demand is less as a result of which the demand for ink is also less. The price and demand go in opposite direction. The effect of changes in price of a commodity on amounts demanded of related commodities is called Cross Demand.

**4. Tastes of the Consumers :** The amount demanded also depends on consumer's taste. Tastes include fashion, habit, customs, etc. A consumer's taste is also affected by advertisement. If the taste for a commodity goes up, its amount demanded is more even at the same price. This is called increase in demand. The opposite is called decrease in demand.

**5. Wealth :** The amount demanded of commodity is also affected by the amount of wealth as well as its distribution. The wealthier are the people; higher is the demand for normal commodities. If wealth is more equally distributed, the demand for necessaries and comforts is more. On the other hand, if some people are rich, while the majorities are poor, the demand for luxuries is generally higher.

**6. Population :** Increase in population increases demand for necessaries of life. The composition of population also affects demand. Composition of population means the proportion of young and old and children as well as the ratio of men to women. A change in composition of population has an effect on the nature of demand for different commodities.

**7. Government Policy :** Government policy affects the demands for commodities through taxation. Taxing a commodity increases its price and the demand goes down. Similarly, financial help from the government increases the demand for a commodity while lowering its price.

**8. Expectations Regarding The Future :** If consumers expect changes in price of commodity in future, they will change the demand at present even when the present price remains the same. Similarly, if consumers expect their incomes to rise in the near future they may increase the demand for a commodity just now.

**9. Climate and Weather :** The climate of an area and the weather prevailing there has a decisive effect on consumer's demand. In cold areas woolen cloth is demanded. During hot summer days, ice is very much in demand. On a rainy day, ice cream is not so much demanded.

**10. State of Business :** The level of demand for different commodities also depends upon the business conditions in the country. If the country is passing through boom conditions, there will be a marked increase in demand. On the other hand, the level of demand goes down during depression.

**Law of Demand**

*The law of demand expresses a relationship between the quantity demanded and its price.* The law refers to the direction in which quantity demanded changes with a change in price.

> ***It may be defined in Marshall's words as "the amount demanded increases with a fall in price and diminishes with a rise in price".***
> ***According to Prof. Samuelson*** *"When the price of goods is raised (at the same time that all things are held constant) less of the demanded or if a great quantity of a of goods is put in the market then other things being equal it can be sold only at lower price."*

Therefore The law of demand states that other factors being constant price and quantity demand of any good and service are inversely related to each other. When the price of a product increases, the demand for the same product will fall.

*These assumptions are :*

- *There is no change in the tastes and preferences of the consumer;*
- *The income of the consumer remains constant;*
- *There is no change in customs;*
- *The commodity to be used should not confer distinction on the consumer;*
- *There should not be any substitutes of the commodity;*
- *There should not be any change in the prices of other products;*
- *There should not be any possibility of change in the price of the product being used;*
- *There should not be any change in the quality of the product; and*
- *The habits of the consumers should remain unchanged. Given these conditions, the law of demand operates. If there is change even in one of these conditions, it willstop operating.*

**Reason for Law of Demand**

**Law of Diminishing Marginal Utility :** The law of demand is based on the law of diminishing marginal utility which define that as the consumer purchase more and more units of commodity the utility reduce from each successive unit goes on decreasing.

**Substitute Effect :** Substitution effect also affects the demand curve to slope from left to right. As the price of a commodity falls price of its substitute goods remain the same. The consumer will buy more that of commodity. For instance tea and coffee are the substitute goods. If the price of tea goes down the consumer may substitute tea or coffee although price of coffee remains the same. Therefore with fall in price the demand falls due to unfavorable substitution effect.

**Income Effect :** If the price of commodity falls the real income of consumer goes up. For example Ram buy Rs.20 Per dozen banana. He is able to buy 1 dozen banana but now the price of banana falls to Rs. 15 per dozen which leads increase in his real income by Rs.5 in case either consumer will buy more quantity of banana.

**Exception Law of Demand**

Law of Demand indicates the inverse relationship between price and quantity demanded of a commodity. It is generally valid in most of the situations but there are some situations under which there may be direct relationship between price and quantity demanded of a commodity. These exceptions are known as exceptions to the law of demand.

**Consumer Ignorance :** Consumer's ignorance induce them to buy/purchase more in the costly market. Sometimes they think like high price commodity is better in the quality. Thus with the increase in price, demand increases.

**Necessary Goods :** There are some commodities which are not necessities/necessary but have become necessities because of their constant use and fashion. For example: LPG gas, Petrol, etc. prices of such commodities increases, demand does not show any tendency to contract and it negatives the law.

**Conspicuous and Consumption :** If consumers measure the desired ability of the utility of a commodity, solely by its price and nothing else, then they tend to buy more of the commodity at higher price and less of it at lower price. Hence, there is a direct relationship between price & quantity demanded. For example: gold ornaments, diamonds, hair paintings. Higher the price of the good, greater will be the prestige of the buyer in the society and vice-versa. When price falls, the commodity comes within the reach of lower class people and they tend to demand more because of demonstration effect.

**Speculation :** If people expect the price of good to rise in near future, they demand more even at higher price and if they expect the price to fall in near future, they demand less of it even at lower price. Thus more quantity of goods is demanded at rising prices and less quantity of goods is demanded at falling prices. This seems contrary to law of demand.

**Giffen Goods :** These are special type of inferior goods named after Sir Robert Giffen. According to him, ***when price of inferior goods increases, demand increases, & when price falls, demand falls. So there is direct relationship between price and demand.***

People increase preferences towards superior goods due to rise in their real income. This tendency is found in low class people. However if price increases beyond certain limit, naturally demand may fall as people prefer superior goods.

**Emergencies :** During emergencies like war, famine etc. households behave in an abnormal way. Households accentuate scarcities and induce further price rise by making increased purchases even at higher prices because of the apprehension that they may not be available. On the other hand during depression, fall in prices is not a sufficient condition for consumers to demand more if they are needed.

**Change In Fashion :** A change in fashion and tastes affects the market for a commodity. When a digital camera replaces a normal manual camera, no amount of reduction in the price of the latter is sufficient to clear the stocks. Digital cameras on the other hand, will have more customers even though its price may be going up. The law of demand becomes ineffective.

**Snob Effect :** Some buyers have a desire to own unusual or unique products to show that they are different from others. In this situation even when the price rises the demand for the commodity will be more.

**Seasonal Goods :** Goods which are not used during the off-season (seasonal goods) will also be subjected to similar demand behavior.

**Goods In Short Supply :** Goods that are available in limited quantity or whose future availability is uncertain also violate the law of demand.

**Demonstration Effect :** It refers to a tendency of low income groups to imitate the consumption pattern of high income groups. They will buy a commodity to imitate the consumption of their neighbors even if they do not have the purchasing power.

**Extension and Contraction Demand**

The demand for a commodity changes due to a change in price. It is called extension and contraction of demand. ***When there is decrease in price of commodity there is in increase in demand of that commodity. This is called extension of demand.***

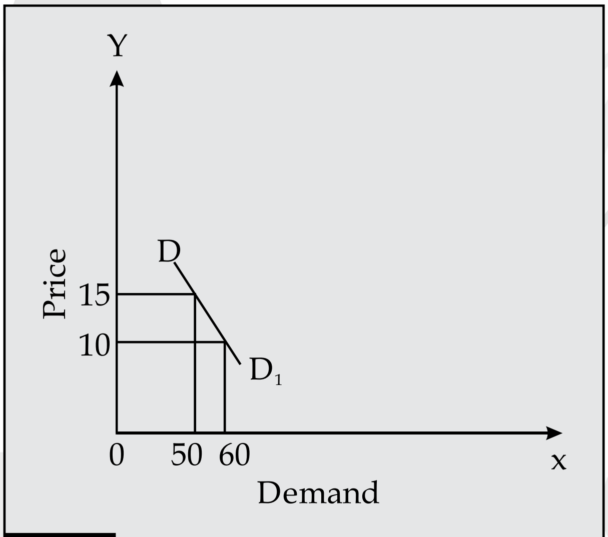


***Fig. :*** *Extension Demand*

The diagram shows extension of demand. Quantity of demand is shown on OX axis. The price is shown on OY axis. DD is demand curve. When price comes down the quantity demanded extends and demand curve moves downward.

***When there is increase in price of a commodity there is decrease in the demand for that commodity. This called contraction of demand.*** Thus demand varies in opposite direction due to change in price.

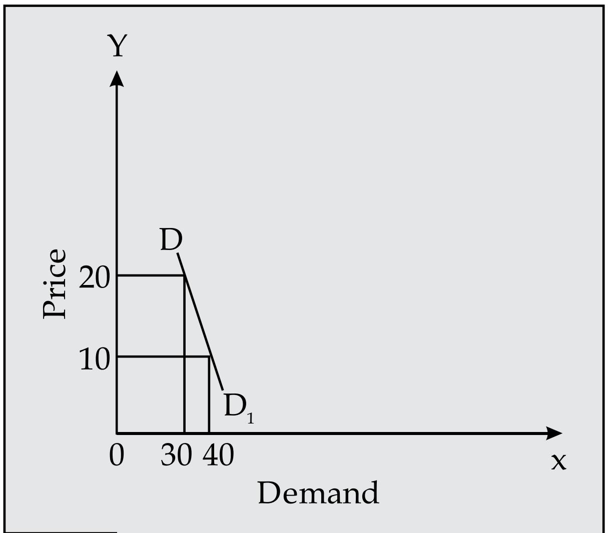


*Fig. : Contraction Demand*

The diagram shows contraction of demand. Quality of demand is shown on OX axis. The price is shown on OY axis. DD is demand curve. When price increases the quantity demanded comes down and demand curve moves upward.

**Increase in Demand and Decrease in Demand**

***Increases in demand are shown by a shift to the right in the demand curve.*** This could be caused by a number of factors, including a rise in income, a rise in the price of a substitute or a fall in the price of a complement.

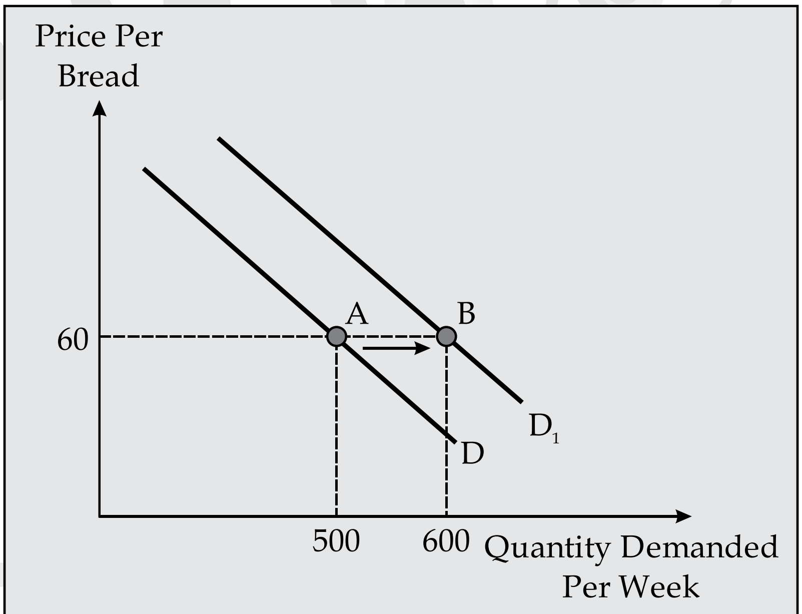


*Fig. : Increase in Demand or Right Shift in Demand Curve*

An increase in demand can be illustrated by a shift in the demand curve to the right.

**Decrease in Demand :** ***Conversely, demand can decrease and cause a shift to the left of the demand curve for a number of reasons, including a fall in income, assuming a good is a normal good, a fall in the price of a substitute and a rise in the price of a complement.***

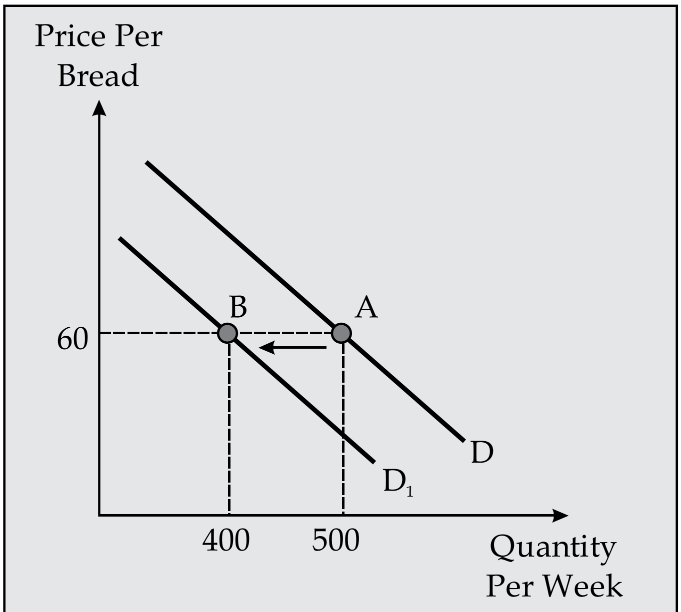


***Fig. : Decrease in Demand or Left Shift in Demand Curve***

Decreases in demand are shown by a shift of the demand curve to the left.

**Ques.** *Normally Demand curve slopes* ***(NTA UGC-NET June 2012 P-II)***

*(A) Upward* *(B) Downward*

*(C) Horizontal* *(D) Vertical*

**Ans.** *(B) The demand curve generally slopes downward from left to right. It has a negative slope because the two important variables price and quantity work in opposite direction. As the price of a commodity decreases, the quantity demanded increases over a specified period of time, and vice versa, other, things remaining constant.*

**Ques.** *A commodity is used for multiple purposes, then the demand for it is known as* ***(NTA UGC-NET Dec. 2012 P-II)***

*(A) Joint Demand* *(B) Composite Demand*

*(C) Direct Demand* *(D) Autonomous Demand*

**Ans.** *(B) Composite demand is where goods have more than one use.*

**Ques.** *Match the items of List-I with those of List-II and indicate the correct code :*

| | ***List-I*** | | ***List-II*** |
|---|---|---|---|
| *(a)* | *Substitute Goods* | *(i)* | *Negative Cross Elasticity* |
| *(b)* | *Complementary Goods* | *(ii)* | *Low Price Elasticity* |
| *(c)* | *Giffen Goods* | *(iii)* | *Positive Cross Elasticity* |
| *(d)* | *High Income Group Consumption Goods* | *(iv)* | *Positive Price Elasticity* |

***Codes :*** ***(NTA UGC-NET Dec. 2015 P-II)***

| | **(a)** | **(b)** | **(c)** | **(d)** |
|---|---|---|---|---|
| (1) | (iii) | (iv) | (ii) | (i) |
| (2) | (iii) | (i) | (iv) | (ii) |
| (3) | (ii) | (iii) | (i) | (iv) |
| (4) | (i) | (ii) | (iii) | (iv) |

***Ans.*** *(2) Correct match is given below :*

| | **List-I** | | **List-II** |
|---|---|---|---|
| (a) | *Substitute Goods* | (i) | *Positive Cross Elasticity* |
| (b) | *Complementary Goods* | (ii) | *Negative Cross Elasticity* |
| (c) | *Giffen Goods* | (iii) | *Positive Price Elasticity* |
| (d) | *High Income Group Consumption Goods* | (iv) | *Low Price Elasticity* |

***Ques.*** *A rectangular hyperbola shaped demand curve on all its points has :*

***(NTA UGC-NET June 2015 P-II)***

*(A) Equal slopes of the price demand curve*

*(B) Price elasticity equal to unity*

*(C) Varying price elasticity*

*(D) Both slope and price elasticity equal*

***Ans.*** *(B) A rectangular hyperbola shaped demand curve on all its points has price elasticity equal to unity.*